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Specific-factors influencing market selection decision by Malaysian construction firms into international market

Che Maznah Mat Isa[a*], Hamidah Mohd Saman[b], Siti Rashidah Mohd Nasir[c]

[a&c] *Senior Lecturer, Faculty of Civil Engineering, UiTM, Shah Alam, Selangor Malaysia*
[b] *Associate Professor, Faculty of Civil Engineering, UiTM, Shah Alam, Selangor, Malaysia*

Abstract

Market entry strategy is used to make the firm's entering new foreign market possible to expand their businesses in terms of services, products, technology, human and other resources. It requires the firm to decide which market to enter (market selection decision), how to enter (entry mode decision), and when to enter (entry timing decision). Hence, focusing on the market selection decision is one of the important dimensions in the process of internationalization and is crucial in order to ease the complexity and difficulty of global market expansion. The main objective of this study is to investigate the factors that are of critical significance influencing market selection decisions by Malaysian construction firms into international market. Questionnaires were sent to one hundred nine (109) firms listed under Construction Industry Development Board (CIDB) Malaysia giving twenty one percent response rate. Factor analysis was used to group the twenty-seven factors into four specific-factors namely; firm, country, industry and project. The findings from regression analysis carried out revealed that the project-specific factors have contributed significantly to the firms' market selection decision to penetrate international market. These factors which are loaded highest in order of significance were the "intensity of competition", "existence of strict quality requirements", "proximity to competitors", "proximity to host country" and "firm international competitiveness". This study illustrates the determination of the specific-factors influencing the firms' decision related to market selection into international domain. It is hope that the findings would offer valuable information to Malaysian construction firms with intention to internationalize their businesses.

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Keywords-market selection decision; international market; Malaysian construction firms; specific-factors

1. Introduction

Globalization brings huge implications and also offers potentials to the new world economies. Guler and Guillén (2009) reported that, venture capital firms have increasingly turned to foreign countries in search of investment opportunities. This situation is also evident for construction firms as international construction is not a new phenomenon. Hence, in the current borderless world, no market is safe from foreign competition and it can no longer be seen as a localized industry. However, Dacko (2002) claims that firms commonly face particularly difficult

* Corresponding author. Tel.: +60196204707; fax: +60355435275.
E-mail address:chema982@salam.uitm.edu.my

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decisions of planning to enter specific foreign mar11kets. According to Hodgetts *et al.* (2006), the firms need to consider not only the country but also the specific locale within the chosen country. Therefore, a thorough assessment of specific factors on the country or market environment, firm's capabilities and project characteristics must be done prior to their decisions to enter the competitive and high risk global market. Since, the nature and complexity of international business environment are unique from one country to another, it entails into higher external risks (country and industry factors) and internal barriers (firm and project factors) to enter the foreign market. Thus, it is essential for the Malaysian construction firms to adopt suitable market entry strategy to enter foreign markets. Hence, this study identifies and ranks the most critical specific factors and their influence on the Malaysian firms' international market selection decision.

2. Literature Review

Reviews on previous studies indicate that much research has been widely explored focusing on international market entry strategies ((Luo & Peng, 1998); Yean, Ling, Ibbs, & Chew, 2008; Chen, Goldstein, & Orr, 2009; Polat & Donmez, 2010; Lee, Jeon, Kim, & Kim, 2011). Some research on construction firms indicate different strategies were used in order to penetrate into foreign market (Lu, 2010; Venegas & Alarcon, 1997). Han, Kim, Jang and Choi (2010) investigated critical issues on international contractors, concluding that the uncertainty and aggressive changes of global construction can cause serious threats to the players. A study on Chinese construction firms by Zhao, Shen, Asce and Zuo (2009) revealed some important factors influencing their market expansion which include country-specific factors such as market competition; economic, social and political environment; whilst the firm-specific factors include, specialty expertise, management, financial and technological abilities, financial and resources. The findings revealed that Chinese government played an important role influencing the firms' market entry decision by holding a strong support and promotion to the firms. Furthermore, the project-specific factors identified were low costs of workforce, materials, machinery and equipment. They were also found to be lacking of R&D capacity and commitment, inadequate design capacity, lack of highly skilled labor and low productivity, weak financing capacity, lack of familiarity with the local system, and language disadvantage. In another study, Yean, Ling and Gui (2009) encouraged foreign contractors to grab the opportunities in Chinese market by offering their strengths in distinguished product and services, thus complementing the local Chinese contractors those were behind in design and technical capability, project management skills, financial capacity and international experience. A study by Yean, Ling, Ibbs and Chew (2008) on Vietnamese firms shows that they lagged behind foreign firms in financial capacity, experience in complex projects, knowledge in advanced design and construction technology, and management ability. Another study by Chen and Orr (2009) on Chinese contractors in Africa revealed that the needs for good infrastructure, availability of financing sources and availability of natural resources are among the important factors. In recognition of the previous contributions to the knowledge body of international market entry strategy, it should be noted that less attention has been given to the identification of critical specific factors influencing the construction firms' decision in selecting specific market in their expansion strategy. Hence, this study intends to contribute to an improved understanding of particular relationships that exist between the market selection decisions made by firms in their internationalization process, and attempts to respond to the specific factors influencing the decisions to enter foreign markets. The factors identified from the literature reviews in relation to international market selection decision have been used as the basis to develop the theoretical framework for this study. The dependent variable in this study is market selection decision which is the variable of primary interest, the variances in which are attempted to be explained by the independent variables (specific factors).

3. Methodology

The target population is from the cross-section of Malaysian construction firms those undertaken and completed projects in the international market. The selection is based on CIDB (2010) record with 109 firms registered as global players operating in 49 countries. Their involvements in international projects includes various sectors such as buildings, infrastructures, branches of engineering, mechanical and electrical, power transmission and plant, and oil and gas. The questionnaires consist two parts. Part 1 enquires on the firms' international contracting experience, types of contracting activities and their entry decision into specific market. Part 2 solicits their opinions on the specific-factors influencing their market entry decision. The level of significance for each opinion was measured using a 5-point Likert scale. (1: Not critical; 2: A little critical; 3: Critical; 4: Very critical; and 5: Extremely critical). Twenty-seven (27) specific factors have been identified from previous studies, which some of them were discussed in the literature section. These factors are input into the SPPS to carry out factor analysis with component matrix after rotation presented in Table 3. In order to determine the critical specific-factors influencing the firms' market selection decision into

international market, several statistical analysis techniques such as validity, normality, reliability tests and factor analysis are adopted. The purpose of each method and its results are explained in the results analysis section.

4. Analysis of Results

4.1. Respondents

In total, twenty three (23) respondents returned the completed questionnaires giving a response rate of 21 per cent. The response rate is reasonable since most of the survey done in Malaysia generated a rate that falls between 10 to 20 per cent (Ramayah, Yan & Sulaiman, 2005; Ainin *et al.*, 2010).

4.2 Respondents' Market Selection

Results show that twelve (12) respondents (52%) have internationalized in the ASEAN regions including Brunei, Cambodia, Indonesia, Myanmar, Philippines, Singapore, Thailand and Vietnam, while seven (7) respondents (30%) were doing businesses in the South Asia Continent in countries such as Bangladesh, India, Maldives, Pakistan and Sri Lanka. The results are in line with the CIDB (2011) record on the countries where about sixty six per cent (66%) of Malaysian firms have internationalized in both ASEAN and South Asia Continent regions.

4.3 Validity Test

Kaiser-Mayer-Olkin (KMO) and Bartlett tests have been carried out to validate the specific factors considered for market selection decision in this study. Kaiser (1974) stated that KMO static varies between 0 and 1 and recommend accepting values greater than 0.5 which indicates that the sample meets the fundamental requirements for factor analysis (Hair *et al*., 1995). Table 1 shows the Barlett test of sphericity and KMO values to test validity on the specific factors.

Table 1: Barlett and KMO tests on specific factors for market selection decision

Independent Variable	Bartlett	KMO
Country-specific factor	0.000	0.548
Industry-specific factor	0.002	0.339
Firm-specific factor	0.000	0.517
Project-specific factor	0.000	0.514

The results show that all KMO values are greater than 0.5 except for industry specific- factors (0.339). Furthermore, a significant level of Barlett's value of 0.000 ($p<0.001$) is measured for all factors except for the industry-specific factors. Hence, the analysis shall exclude the industry-specific factors.

4.4 Normality Test

In this study, the normality of the variables was established by evaluating the data distributions for skewness and kurtosis. The standard error is the range of possible error occurs in data (Good standard error value < 1.0).

Table 2: Normality tests for market selection decision factors

Variable	Skewness		Kurtosis	
	Statistic	*Standard Error*	*Statistic*	*Standard Error*
Country-specific factors	0.331	0.481	-1.207	0.935
Industry-specific factors	0.284	0.481	-0.389	0.935
Firm-specific factors	-0.284	0.481	-1.291	0.935
Project-specific factors	0.485	0.481	-1.372	0.935

Table 2 shows the values of the standard error for skewness and kurtosis are 0.481 and 0.935, respectively. Both values indicate that the standard errors are good values (<1.0). Hence, the normality assumption for each variable was met, which indicates that the all specific-factors are normally distributed.

4.5 Factor Analysis

Factor analysis was used in this study to look for groups among the inter-correlations of a set of variables in which the data may be reduced or summarized using smaller set of factors or components (Pallant, 2009). In addition, Sekaran (2011) states that factor analysis demonstrates which of the items or factors that are most appropriate for each dimension in order to establish construct validity. In this study, the analysis is used to reduce the twenty-seven (27) factors and detect structure in the relationship between the factors which requires factor rotation (Norusis, 2005). Each

factor belongs only to one of the four groups of specific factors; project, firm, country and industry. Table 3 shows the component matrix after rotation with value of factor loadings more than 0.5 (Kaiser & Rice, 1974).

Table 3: Rotated component factor analysis for market selection decision factors

Factors	Group			
	Project	Firm	Country	Industry
Intensity of competition	.909			
Existence of strict quality requirements	.890			
Proximity to competitors	.818			
Proximity to host country	.753			
Firm international competitiveness	.713			
Anticipated noneconomic risk	-.650			
Similarity of overseas market (cultural/religious)	.626			
Overseas market selection experience	.580			
Construction demand (e.g. finance, labor, material, transport and other utilities)				
Experience of company in similar works		.842		
Type of projects (e.g., building, manufacturing)		.808		
Expected profit potential		.807		
Country market potential		-.760		
Size of projects		.707		
Government control on licensing, restrictions &other requirements (i.e. tax rate & interest)		.669		
Existence of strict time limitations		.661		
Type of client (public vs. private)		.592		
Legal entity requirements			.807	
Company strategic orientation/objectives			-.777	
Attitude and intervention of host governments			.699	
Own/accessible resources			-.619	
Contract types (e.g., lump sum, cost-plus)			.613	
Anticipated economic risk			.544	
Availability of funds for projects				.877
Technical complexity of projects				.811
Stage of internationalization				-.756

4.6 Reliability Test

Reliability test using Cronbach's coefficient was conducted to measure the internal consistency of the specific factors under study. Table 4 shows the results for reliability test carried out on factors modified from the rotated component matrix.

Table 4: Reliability tests of factors modified for market selection decision factors

Independent Variables	Cronbach's Alpha	Number of Items
Project-specific factors	0.819	9
Firm-specific factors	0.789	9
Country-specific factors	0.320	8
Industry-specific factors	0.410	5

The results reveal only two main factors that are acceptable and reliable to be considered in the market selection decision by the respondents namely; project-specific factors with value 0.819 and firm-specific factors with the value 0.789. Hence, these specific-factors shall be further used in the following analysis.

4.7 Regression Analysis

Regression analysis is used in this study to investigate the relationships between the independent (specific-factors) and dependent (market selection decision) variables. It is used in the further analysis to determine the most preferable factors that influence the market selection decision by the respondents. The results from Table 5 show that the significant value of the F statistic of 31.346 > 0.05. The model in this study also reaches statistical significance with Sig = .000 ($p<.0005$).

Table 5: ANOVA value in regression analysis for dependent variable[a]

Model	Sum of Squares	Df	Mean Square	F	Sig.[a]
Regression	38.632	2	19.316	31.346	.000
Residual	12.325	20	.616		
Total	50.957	22			

Table 6 shows the evaluation of each of the independent variable (specific factors). It was carried out to know which of the specific factors included in the model contributed to the prediction of the market selection decision.

Table 6: Coefficient values in regression analysis of specific factors (independent variables [b])

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.[b]
	B	*Std. Error*	*Beta*		
Constant	.012	.203		.060	.953
Project-specific factors	.479	.353	.525	.867	.136
Firm-specific factors	.281	.487	.349	.577	.570

In order to compare the different specific factors, the value in the column labeled Beta under Standardized Coefficients is referred. 'Standardized' means that values for each of the different specific factors have been converted to the same scale to make the comparison between them. In this study, beta values are used to compare the contribution of each independent variable; project-specific and firm-specific. The largest beta value is 0.525 for project-specific indicates that this factor makes the strongest unique contribution in explaining the market selection decision. However, the value of Sig. = .136 (>.05) concludes that project-specific is not making a significant contribution to the prediction of the market selection decision. This may be due to the overlapping of other specific factors in the model.

4.8 Ranking of project-specific factors

The standardized coefficient value of 0.525 in the regression analysis carried out earlier in Table 6 reveals that the strongest unique contribution of an independent variable to explain the dependent variable is from the project-specific group. Table 7 shows the summary of findings on the project-specific factors extracted from Table 3 which are ranked based on the five highest factor loadings.

Table 7: Ranking of project-specific factors based on the loaded factors

Ranking	Element	Loaded Factors
1	Intensity of competition	.909
2	Existence of strict quality requirements	.890
3	Proximity to competitors	.818
4	Proximity to host country	.753
5	Firm international competitiveness	.713

5. Discussion

This section discusses on the findings based on the most influential factors in determining the respondents' market selection decision into international market. The first five of the highest loaded factors; intensity of competition, existence of strict quality requirements, proximity to competitors and host country and company international competitiveness, are discussed as follows:

Over the past decades, competition in the international construction industry has increased dramatically as new construction firms have entered industry from less developed countries as workload have dropped in the major markets (Gunhan & Arditi, 2005). The finding shows that the intensity of competition has been chosen as the most significant project specific-factor contributed to the respondents' decision. It becomes a significant factor as they enforce potential threats for new movers into the market, hence reduces the desire of construction firms to enter the specific market. The existence of strict quality requirements with factor loading of 0.890 was ranked as the second critical factor influencing the firms' market selection decision. This finding indicates that, quality requirements on skilled labor ((Bobillo, López-Iturriaga & Tejerina-Gaite, 2010), supply of knowledge ((Braunerhjelm, Oxelheim & Thulin, 2005) and materials have significantly influenced the respondents' decision to enter the foreign market. The finding shows that the proximity to competitors and host country has also contributed significantly to the respondents' market selection decision. A study by Barkema *et al.* (1996) shows that when the two countries are closer and more similar in terms of culture and language, it is easy for the firms to learn how to compete with other contractors in the

host country. Hence, this findings support that the firms have selected mostly the ASEAN and other countries which are closer and with similar cultural environment. However, Zhao et al. (2009) emphasized the importance to understand the cultural, regulatory and legal systems of the host country to improve the firms' competitiveness. The finding indicates the respondents have agreed that the level of international competitiveness has significantly influenced the respondents' market selection decision. This finding is line with a study by Guler and Guillén (2009), stating that as firms accumulate international experience, they develop competitiveness for foreign market entry. Hence, the firms need sufficient time to gain more international experience to overcome the constraints and risks related to international construction.

6. Conclusion

The present study builds on and extends the literature on the international market selection decision of construction firms related to project, country, firm and industry specific factors. The objective of this paper was to investigate the factors that are of critical significance influencing market selection decision by Malaysian construction to internationalize. It was achieved through a survey to construction firms with international experience. The empirical evidence shows some of the project-specific factors which have significantly influenced the firms' decision in their market expansion abroad were the intensity of competition, existence of strict quality requirements, proximity to competitors and host country and firm international competitiveness. Hence, this study supported by other previous studies have suggested that firms wish to expand internationally must equip themselves with high level of international experience related to projects and competitors, adequate information on the foreign market to understand the social, cultural and the host government's rules and regulations. It is hoped that the findings in this study will help the construction firms in their strategic planning to expand into international market.

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